

DCL-200 FD

1080p DLP LED Front Projector **User's Manual**



W O L F
C I N E M A

ABOUT THIS MANUAL

This manual is designed for use with the Wolf Cinema DCL-200FD Home Cinema Projector and Outboard ProScaler™ Video Processor. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information and specifications in this document are subject to change without notice.

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TRADEMARKS

All trademarks and registered trademarks are the property of their respective owners.

FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment to an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.



The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISH OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNAL ONLY.

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Notices



WARNING! To meet FCC requirements, a shielded power cord is recommended in order to prevent interference. It is essential that only the supplied power cord is to be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not approved by the party responsible for compliance could void your authority to operate the equipment.



WARNING! High-brightness light source. Do not stare into the beam of light, or view directly. Be especially careful and ensure that children do not stare directly into the beam of light.



WARNING! To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.



CAUTION! For minimal servicing and to maintain high image quality, we recommend that you use the projector in an environment that is smoke and dust free. When used in areas where there is a lot of smoke or dust, the filter and lens should be cleaned often to lengthen the service life of the projector.



WARNING! Some IC chips in this product include confidential and/or trade secret property belonging to Texas Instruments. Therefore you may not copy, modify, adapt, translate, distribute, reverse engineer, reverse assemble or decompile the contents thereof.



WARNING! The ventilation slots and objects next to them may get extremely hot during operation. Do not touch these areas until they have sufficiently cooled down.

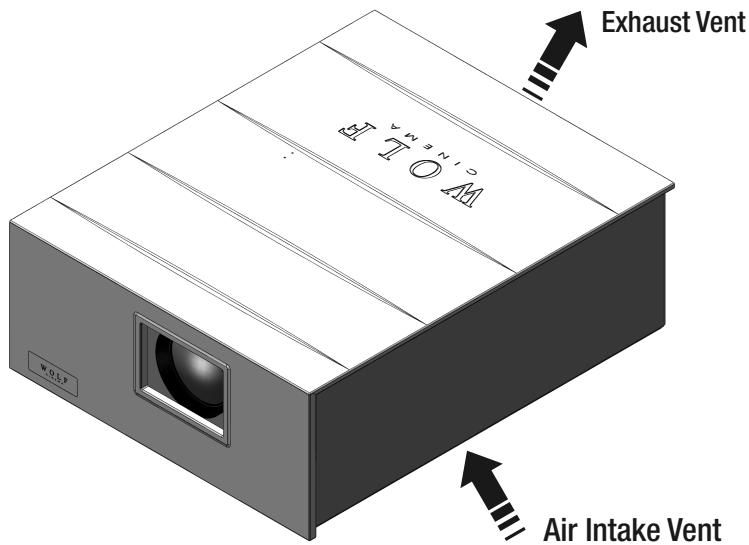


DISPOSAL Do not use household or municipal waste collection services for disposal of electrical and electronic equipment. EU countries require the use of separate recycling collection services.

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CAUTION REGARDING THE EXHAUST OF THE PROJECTOR

Do not place the projector in a space that is poorly ventilated or confined. Allow at least 20 in. (50 cm) clearance from walls and have free air flow around the projector.



Before using the projector, please read this operation guide carefully.

To facilitate reporting the loss or theft of your Wolf Cinema components, record the Serial Number located (a) on the bottom of the projector and (b) on the rear of the outboard ProScaler; retain this information. Before recycling the packaging, be sure that you have checked the contents of the carton(s) thoroughly against the list of "Package Contents" on page 6.

WARRANTY

Promptly register the Projector's Warranty using the REGISTRATION CARD packed with the projector. The Warranty assures that you immediately receive the full benefit of the parts, service and labor warranty applicable to your purchase.



LED LIGHT:

DO NOT STARE INTO BEAM

CLASS 2 LED PRODUCT

$P \leq 0.88 \text{ mW}$ $\lambda = 452 \text{ nm}$

IEC 60825-1:1993 + A1:1997 + A2:2001

EN 60825-1:1994 + A2:2001 + A1:2002

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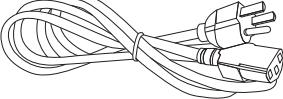
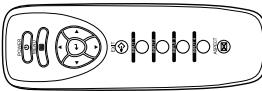
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Introduction

Package Contents

Open the package and ensure that you have the following items:

		
System IR Remote	Two "AA" size batteries	Power cord (By country)
		<ul style="list-style-type: none">• Ceiling mount kit• Variscope™FX external anamorphic lens assembly
Secondary IR Remote	Two "AAA" size batteries	Optional accessories:
		Owner's Manual

Note: • Some of the cables may not be included depending on the region. Please check with your nearest Authorized Dealer.
• If anything is missing or appears damaged, contact your Wolf Cinema dealer immediately.

System Features

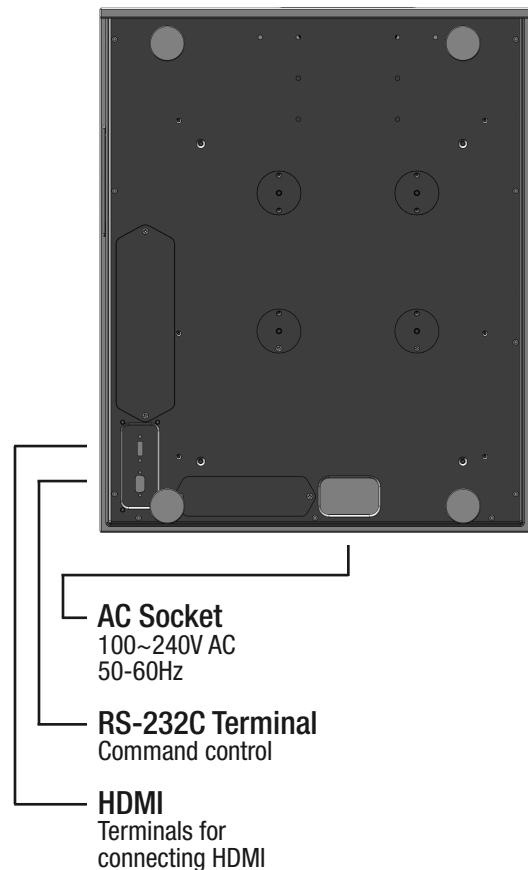
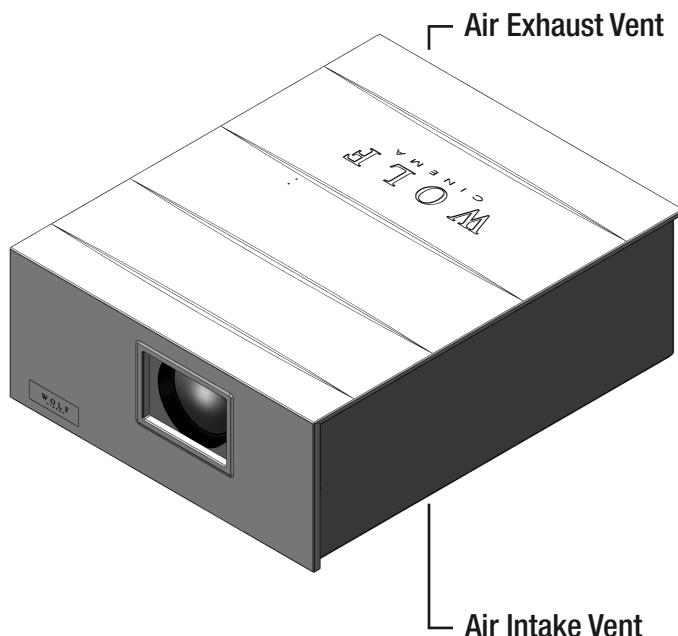
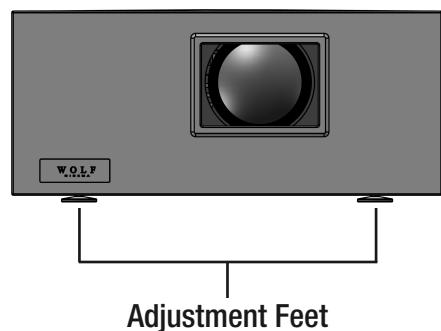
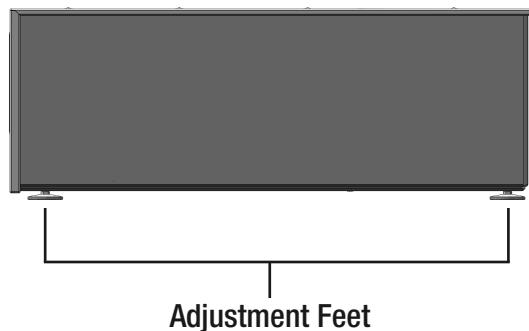
- Advanced 0.95" 1080p Texas Instruments DMD™ chip provides significantly improved resolution, optical efficiency and contrast ratio performance.
- The DCL-200FD projector employs three high-output, RGB [red, green, blue] LED emitter panels, resulting in amazing color purity, excellent peak white and deep black contrast performance.
- LED emitter panels last up to 30,000 hours of continuous operation; no bulb to replace.
- No color wheel and no undesirable color wheel artifacts (i.e., "rainbow" or image strobing).
- Outboard Wolf Cinema ProScaler™ with multiple HDMI, component, S-Video and composite inputs.
- Advanced motion processing algorithms enhances video performance.
- Extensive improvements on the jagged edges or slanted lines in moving images.
- Improved up-conversion imaging from non-HD content.
- High-performance film modes.
- 3:2 pull down enhancement for 480i content, 2:2 for 576i signals and HDTV 1080i content.
- Use of HDMI [HDCP compliant] input connections enables all signal processing in the digital domain.

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Quick Setup Guide

Components

DCL-200 FD Projector



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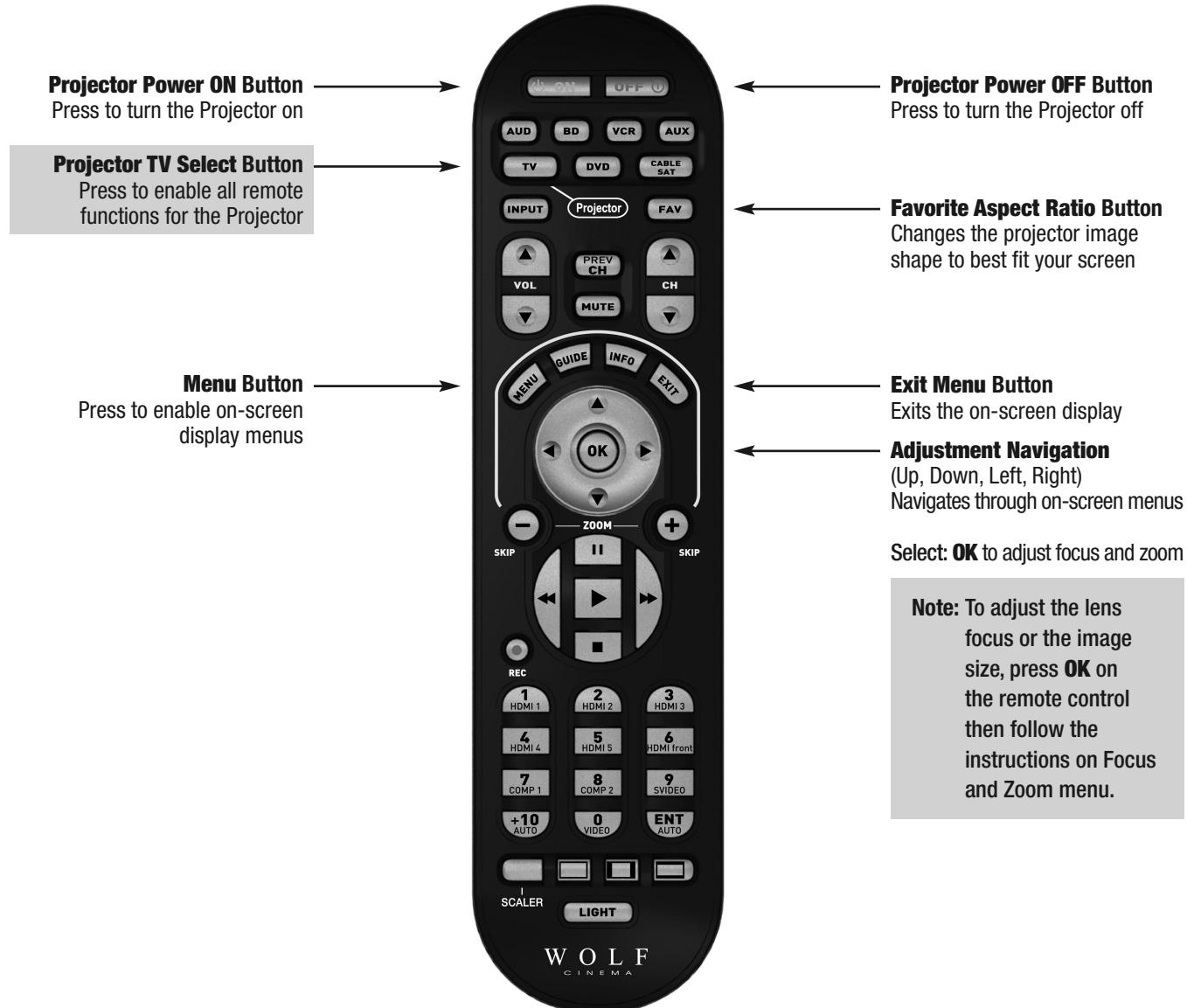
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Using your Remote Control

System Remote Control – Key Projector Functions

The Wolf DCL-200FD system features an integrated, learning remote and provides for all system functions. The primary IR remote usage controls are outlined over the next two pages. This page highlights the main projector functions

Note: SELECT THE TV BUTTON TO ENABLE THE PROJECTOR CONTROLS



Projector Power ON Button
Press to turn the Projector on

Projector TV Select Button
Press to enable all remote
functions for the Projector

Menu Button
Press to enable on-screen
display menus

Projector Power OFF Button
Press to turn the Projector off

Favorite Aspect Ratio Button
Changes the projector image
shape to best fit your screen

Exit Menu Button
Exits the on-screen display

Adjustment Navigation
(Up, Down, Left, Right)
Navigates through on-screen menus

Select: **OK** to adjust focus and zoom

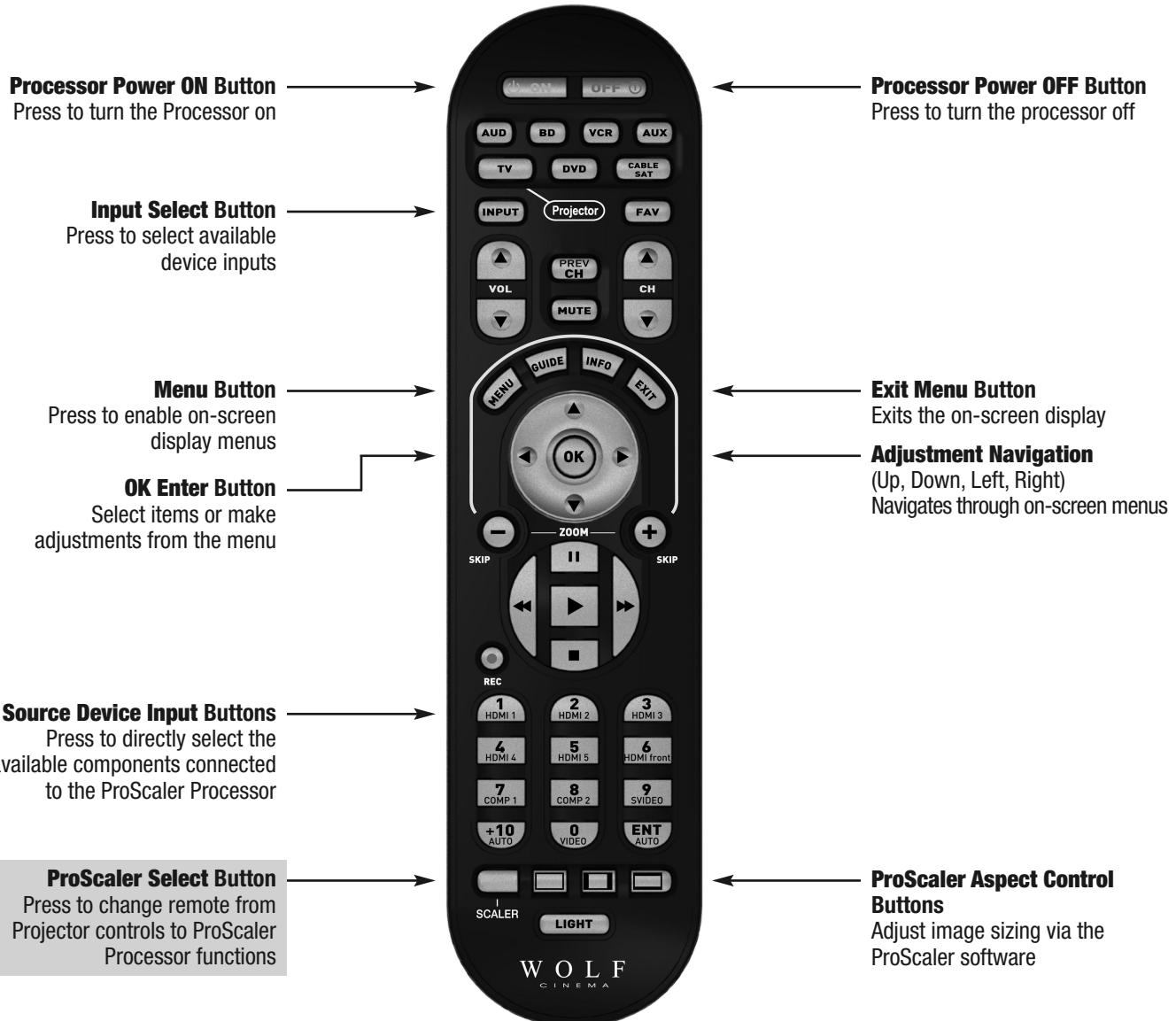
Note: To adjust the lens
focus or the image
size, press **OK** on
the remote control
then follow the
instructions on Focus
and Zoom menu.

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System Remote Control – Key ProScaler Functions

The following are the key PROSCALER functions, within the common remote control structure.

Note: SELECT THE SCALER BUTTON TO ENABLE THE PROCESSOR CONTROLS.
Also refer to the separate Wolf Cinema ProScaler User Guide for additional details.



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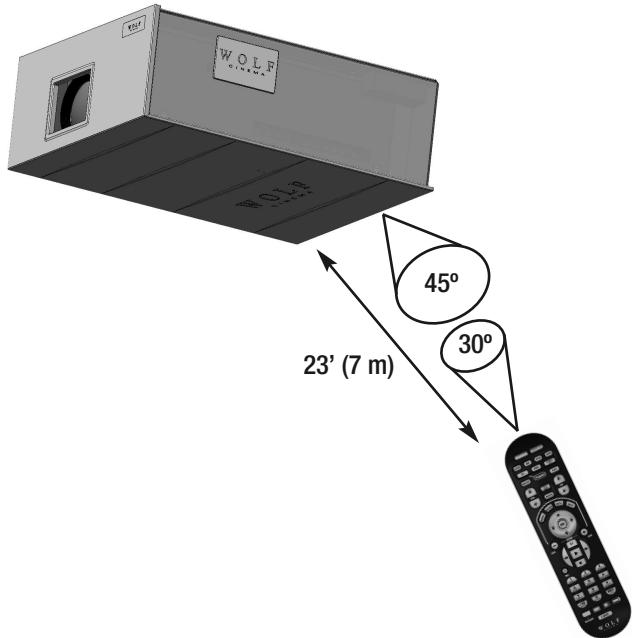
Available Range of the Remote Control

The remote control can be used to control the projector and processor within the ranges shown in the illustration.

Note: • Using the remote control out of range may affect the received signal.

When using the remote control:

- Be sure not to drop it, or expose it to moisture or high temperature.
- The remote control may malfunction under a fluorescent lamp or in bright sunlight.



Inserting the Batteries

The batteries (two "AA" size) are included in the package.

1 Press down the tab on the cover and pull the cover towards the direction of the arrow.



2 Insert the included batteries.

Insert the batteries making sure the polarities correctly match the positive and negative marks inside the battery compartment.

3 Insert the lower tab of the cover into the opening, and press down the cover until it clicks in place.

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Connecting Source Components

Before Setting Up

- Note:**
- Before connecting, be sure to turn off both the projector, the ProScaler and the devices to be connected. After making all connections, turn on the projector, ProScaler and then the other devices.
 - When connecting a computer, be sure that it is the last device to be turned on after all the connections are made.
 - Be sure to read the operation manuals of the devices to be connected before making connections.

Your Wolf Cinema DCL-200FD system can be connected to:

Video Equipment:

- VCR, Laser disc player, camcorders or other video equipment.
- Satellite, Cable or DTV* sources.
- Blu-ray players, DVD players.

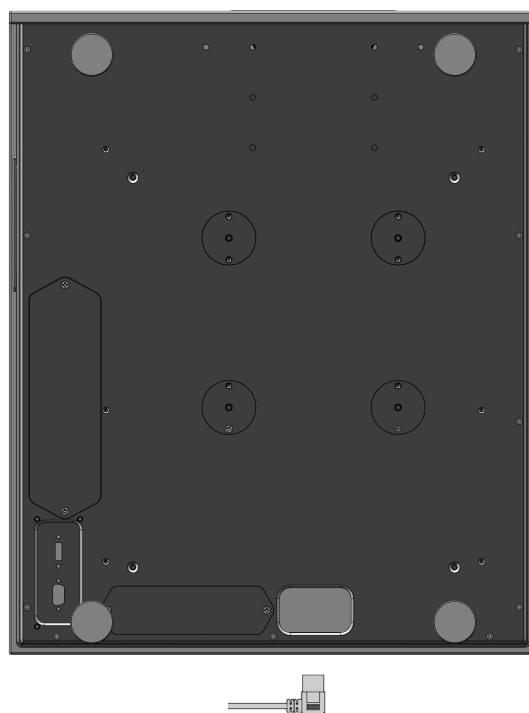
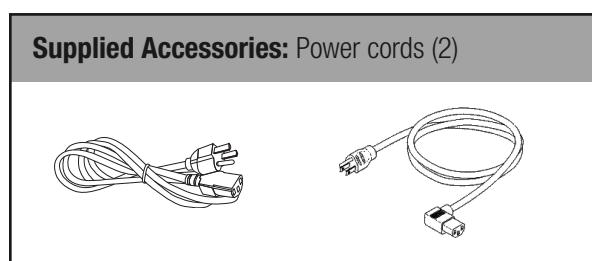
Computers:

- HD 15-pin VGA to RGBHV cabling (optional items sold separately).
- HD 15-pin VGA to HDMI converter box and cabling (optional item sold separately).

*DTV is the umbrella term used to describe the new digital television system in the United States.

Connecting the Power Cords

Plug in the supplied power cords into the AC socket from the base of the Projector and rear of ProScaler.



Note: The projector power cord has a right angle head to fit within the case.

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Wolf Cinema's DCL-200FD projector is optimized to work with the included ProScaler. The ProScaler and projector are carefully calibrated at the factory to support all basic functionality "out of the box."

The projector uses one primary HDMI input, which accepts all incoming video signals as delivered from the ProScaler. The ProScaler processes and routes the variety of source components via the input selected.

There are 10 video inputs on the ProScaler: 6 HDMI [one front panel], 1 Component, 1 Component/RGB, 1 S-Video and 1 Composite input.

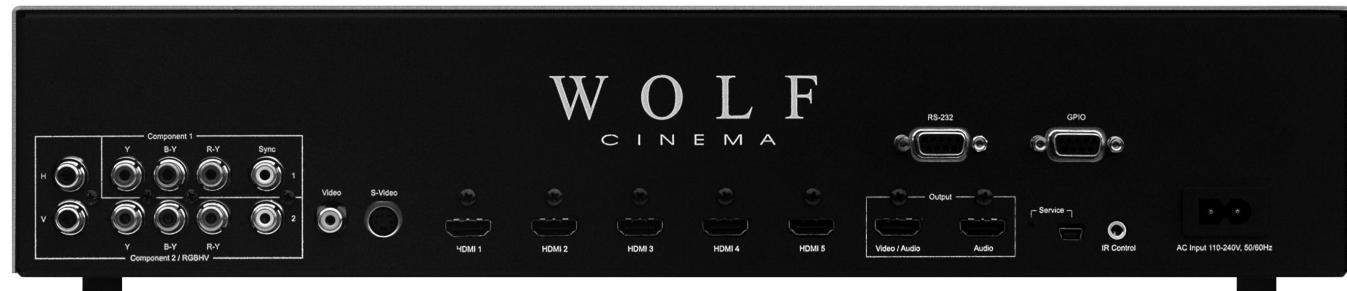
For additional ProScaler operation details, refer to this guide and the separate user manual: **WOLF CINEMA PROSCALER USER MANUAL**

Connecting the Projector and ProScaler

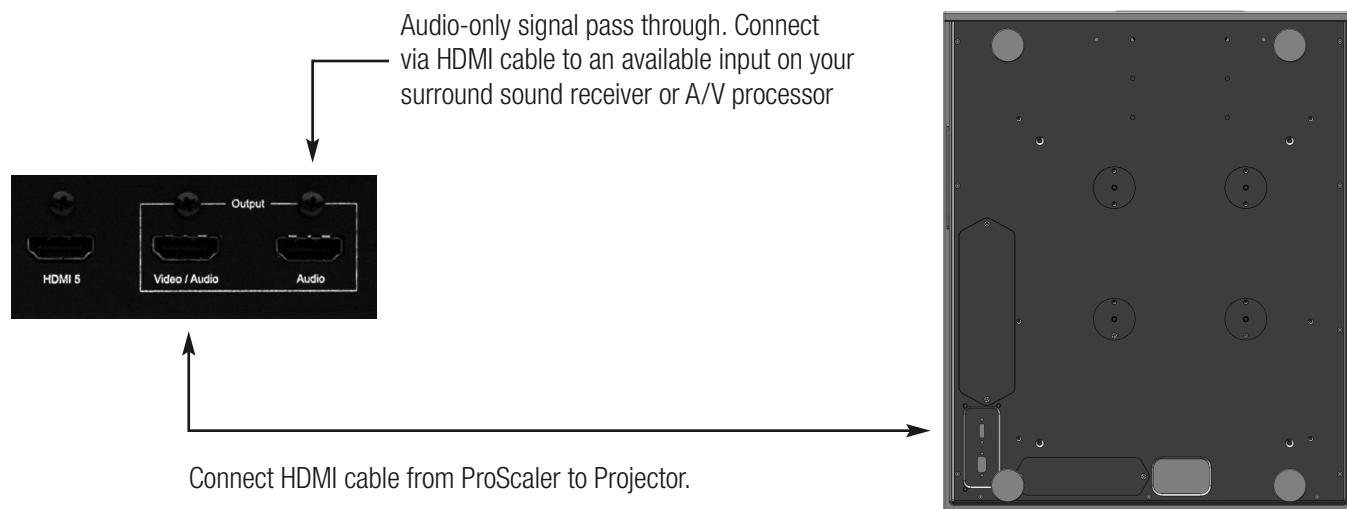
The following basic steps are to be performed to connect all source components, Projector and ProScaler:

1 Connect all sources to the inputs of the ProScaler. For additional details please see the ProScaler Owners Manual.

Note: HDMI input #6 is under the removable WOLF CINEMA logo plate on the panel front.



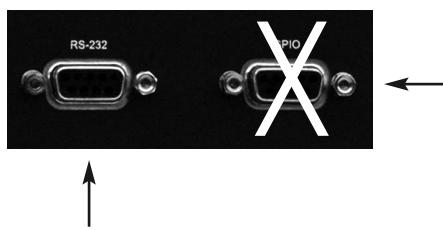
2 Connect the HDMI signal cable to projector: Connect your long run HDMI video signal cable between the ProScaler video output directly to the Projector. Connect the Audio Only HDMI cable (pass through) to your surround sound receiver or processor.



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Note: Wolf Cinema always recommends that you, your custom installer or video calibrator thoroughly test the HDMI video cable(s) with the entire system prior to final installation. HDMI cables vary greatly in overall quality and signal integrity. Many HDMI cables are not designed to support certain information and signal timings over long cable runs. Contact Wolf Cinema technical support and/or your cable manufacturer for additional information regarding recommended HDMI cable lengths and overall system compatibility.

3 RS-232: Route and connect any 9-pin RS-232 cables from your external home automation or control system, separately to both Projector and ProScaler. These two components should be controlled independently.



Note: The GPIO port not used in the DCL-200FD system. It is reserved for discrete communication protocol between the ProScaler and our DCX-series of video projectors. Leave disconnected.

RS-232 interconnect between ProScaler and external control system

4 Connect both Projector and ProScaler to AC power.

Note: Use extreme care when connecting AC Power to any products. Review the important safety notices indicated on pages 1-3 of this manual.

5 Power on the two components:

ProScaler: The ProScaler will automatically turn on. If a Red LED is shown on the right side of the front panel, the scaler is receiving AC power but no video input signal is detected. If a Blue LED is shown, the scaler is receiving AC power and a good video signal has been detected. No LED indicates there is no AC power to the scaler.

If the ProScaler does not turn on automatically, depress the **SCALER** button on the lower left of the system remote control and then depress the green **POWER ON** button at the top.

Step 1 - Select the SCALER button to activate all the ProScaler IR commands via the remote control



Step 2 - Aim the remote at the ProScaler. Select the green POWER ON button to turn on the ProScaler



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Projector: The Projector will remain in a stand-by **OFF** mode until turned on via the supplied IR remote control, or by receipt of a discrete **ON** command from your home automation control system.

To activate the Projector, select the **TV/Projector** button on the IR remote control, then depress and HOLD the green **POWER ON** button at the top of the remote. The projector will turn on in approximately 30 seconds.

Step 1 - Select the **TV/Projector button to activate all the Projector IR commands via the remote control**



Step 2 - Aim the remote at the Projector. Depress and HOLD the green **POWER ON button for 2 seconds to turn on the Projector**



5 Select from the desired components connected to the ProScaler:

Upon power up, the ProScaler defaults to the HDMI #1 input. Other inputs may be directly accessed via the numeric keypad on the ProScaler remote:

To select from available sources, first select the **SCALER button, aim the remote at the ProScaler and then depress the desired input button, as noted on the keypad.**



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Connecting Video Equipment

Using an S-Video or a Composite Video Cable

Using an S-Video or a Composite Video cable, a VCR, laser disc player or other video equipment can be connected to the labeled input terminals.



Note: The S-VIDEO terminal uses a video signal system in which the picture is separated into color and luminance signals to realize a higher-quality image. To view a higher-quality image, use a commercially available S-Video cable to connect the INPUT 3 terminal on the projector and the S-Video output terminal on the video equipment.

Connecting to Component Video Equipment

Using a Component Cable

Use a component cable (commercially available) when connecting to the COMPONENT INPUT terminals, using component video equipment such as DVD players and DTV* decoders. Connect using analog component output terminals.

*DTV is the umbrella term used to describe the new digital television system in the United States.

The component jack for a DVD and so forth may be indicated with Y, CB or CR. Connect each jack as shown right.



ProScaler	Y	B-Y	R-Y
DVD player or DTV decoder	Y Y/G	PB CB	PR CR

Note: When connecting the projector to the video equipment in this way, select **Component** for **Input Source** in the ProScaler **MENU**.

Connecting Video Components with an HDMI to HDMI Cable

Use an HDMI to HDMI cable (supplied accessory) when connecting HDMI video equipment such as Blu-ray players, DVD players and more to the six available inputs.

HDMI Inputs #1 through #5 are located on the rear panel of the ProScaler.

HDMI input #6 is under the removable WOLF CINEMA logo plate on the panel front.



Note: Select the signal output type from the video equipment set up menu

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Connecting a Computer

Connect the computer by either a 15-pin VGA to RGBHV cable (optional accessory, sold separately) or to a VGA to HDMI converter (also an optional accessory, sold separately). The 15-pin VGA to RGBHV cable may be connected to the appropriate component input (1 or 2, depending on the type of PC sync).



- Note:**
- See page 43 "Computer Compatibility Chart" for a list of computer signals compatible with the system. Use with computer signals other than those listed may cause some of the functions not to work.
 - A Macintosh adaptor may be required for use with some Macintosh computers. Contact your nearest Authorized Service Center or Dealer.
 - Depending on the computer you are using, an image may not be projected unless the signal output setting of the computer is switched to the external output. Refer to the computer operation manual for switching the computer signal output settings.

"Plug and Play" Functions [PC]

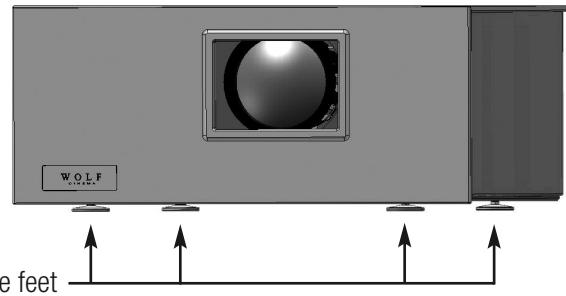
This projector and ProScaler ensemble is compatible with VESA-standard DDC 1/DDC 2B. The system and a VESA DDC compatible computer will communicate their setting requirements, allowing for quick and easy setup.

Before using the "Plug and Play" function, be sure to turn on the projector and ProScaler first and the connected computer last.

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Leveling Feet

- The height of the projector can be adjusted using the leveling feet, when the projector is placed on the uneven surface or when the screen is slanted.
- If the screen is set at a slight angle, the adjustment feet can be used to match the angle at the projector.

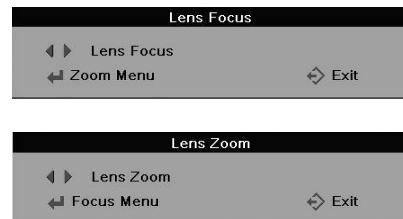


Note: When the height of the projector is adjusted, the image may become distorted (keystoned), depending on the relative positions of the projector and the screen. See DCL-200FD User Manual for details on keystone correction.

Adjusting Lens Zoom and Focus

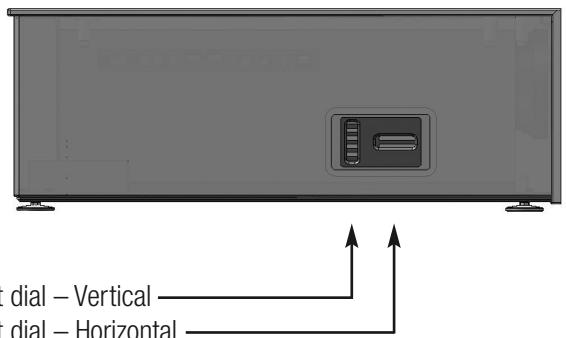
The image is focused and adjusted to the desired size using the on-screen Focus menu and Zoom menu.

- First press the **TV/Projector** button and then press the **OK** button. The Focus menu will appear. Adjust Focus via the left and right arrow buttons on the remote.
- To select Zoom, depress the **OK** button a second time and adjust as above. To exit, either select **MENU** or the **EXIT** button.



Adjusting Lens

The height and width of the projected image can be adjusted to be within the shift range of the lens by rotating the lens shift dial on the side of the projector (remove Wolf Cinema logo plate to access dials).



Note: Do not forcibly turn the lens shift dial beyond the range. This may cause the projector to malfunction.

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Setting up the Screen

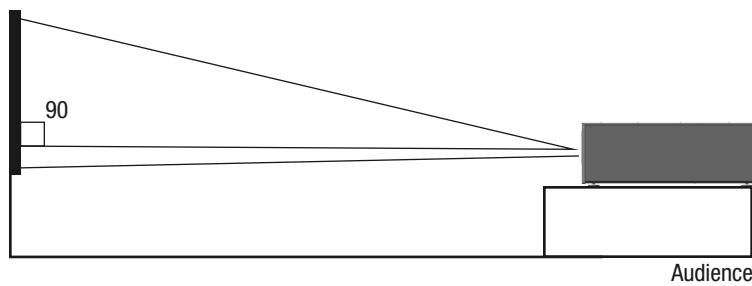
Position the projector perpendicular to the screen with all feet flat and level to achieve an optimal image.

- Note:**
- The projector lens should be centered in the middle of the screen. If the horizontal line passing through the lens center is not perpendicular to the screen, the image will be distorted, making viewing difficult.
 - For an optimal image, position the screen so that it is not in direct sunlight or room light. Light falling directly on the screen washes out the colors, making viewing difficult. Close the curtains and dim the lights when setting up the screen in a sunny or bright room.
 - A polarizing screen cannot be used with this projector.

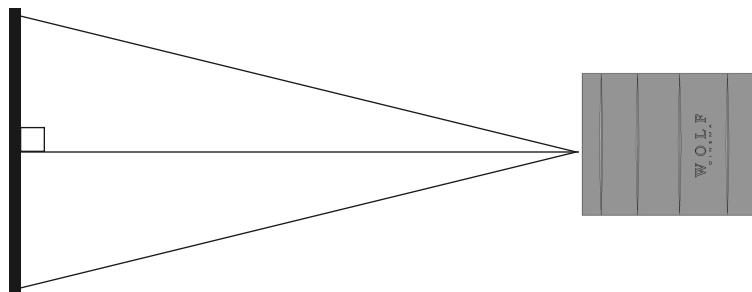
Standard Setup (Front Projection)

Place the projector at the required distance from the screen according to the desired picture size.

An Example of Standard Setup

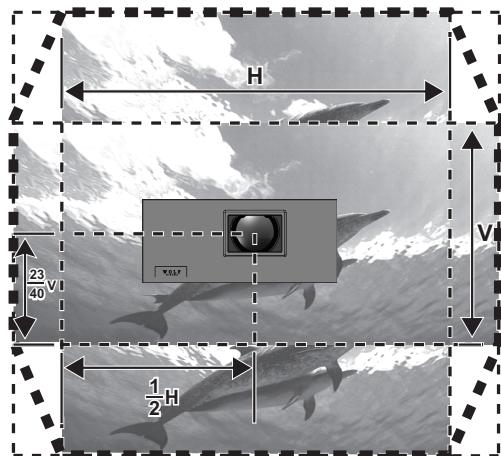


- The distance from the screen to the projector may vary depending on the size of the screen.



- Set the projector in front of the screen. If the projected image is reversed or inverted, readjust the setting to **Front** for **Image Orientation** in the **Display Setup** menu.

- Place the projector so that an imaginary horizontal line that passes through the center of the lens is perpendicular to the screen.



Note: 2D Lens Shift Ability:

- Short throw lens shift:
 - 1/2 of screen height: Up 120%, Down 50%
 - 1/2 of screen height: Left 15%, Right 15%
- Long throw lens shift:
 - 1/2 of screen height: Up 120%, Down 50%
 - 1/2 of screen height: Left 15%, Right 15%
- It is recommended that images be projected onto the dashed line octagonal area for fine image quality.
- There is a tolerance of $\pm 5\%$ in the formula above.

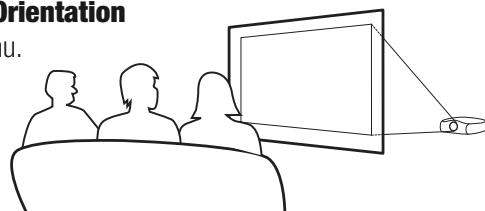
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Projection from Behind the Screen

Projecting a Reversed/Inverted Image

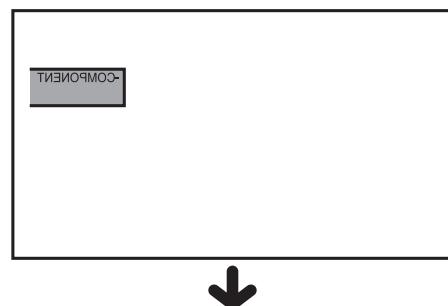
Place a translucent screen between the projector and the audience.

Reverse the image by setting **Floor/Rear** or **Ceiling/Rear** for **Image Orientation** in the **Display Setup** menu.



When using the default setting.

On-screen Display

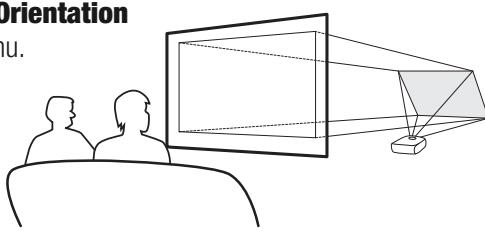


The image is reversed.

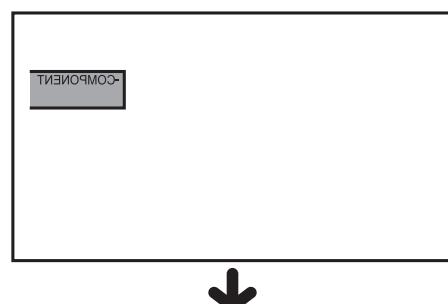
Projection using a mirror

Place a mirror (normal flat type) in front of the lens.

Reverse the image by setting **Floor/Rear** or **Ceiling/Rear** for **Image Orientation** in the **Display Setup** menu.



On-screen Display



The image is reversed.

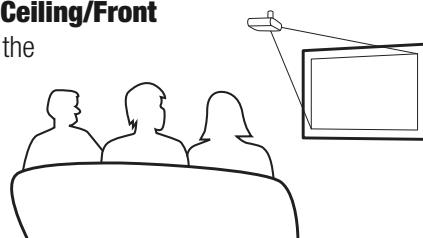
Note: When using a mirror, be sure to carefully position both the projector and the mirror so that the light does not shine into the eyes of the audience.

Ceiling-mount setup

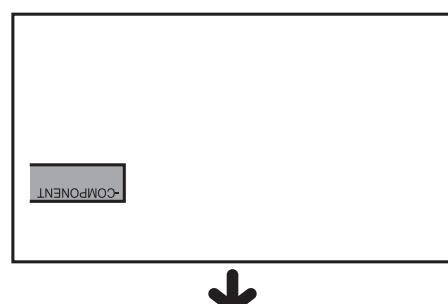
It is recommended that you use the optional ceiling-mount bracket for this installation.

Before mounting the projector, contact your nearest Authorized Service Center or Dealer to obtain the recommended ceiling-mount bracket (sold separately).

Invert the image by setting **Ceiling/Front** for **Image Orientation** in the **Display Setup** menu.



On-screen Display



The image is reversed.

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Basic Operation

Projector ON, INPUT Select Procedures

Connect the required external equipment to the projector before operating the following procedures.

Note: The language preset at the factory is English. If you want to change the on-screen display to another language, reset the language according to the procedure on page 21.

1 Plug the power cords into the wall outlet.

The power indicator illuminates blue, and the projector enters a standby mode.

2 Select the **TV/Projector** button, then the **POWER ON** button.

The power indicator turns off.

3 Press the **SCALER** button, aim the remote at the ProScaler and select the desired INPUT 1-10 via the remote control.

4 Press the **POWER ON** button on the remote control, then press the center **OK** button to turn off the projector whenever the confirmation message is displayed.

Note: If you accidentally press power and do not want to turn off the projector, press **Exit** button or select **No** to turn off the confirmation message.

Note: The power indicator light indicates the status of the LED.

- Blue: The power is ready.
- Blue Blinking: The Projector is powering up or down.

Projector Power ON Button →
Press to turn the Projector on

TV/Projector Select Button →
Press to enable all remote functions for the Projector

OK Button →

Source Device Input Buttons →
Press to directly select the available components connected to the ProScaler Processor

SCALER Button →
Press to change remote from projector controls to ProScaler processor functions



Selecting the On-screen Display Language

The on-screen display language of the projector can be set to English, Français, Italiano, Deutsch, Español, Chinese, Japanese, Korean.

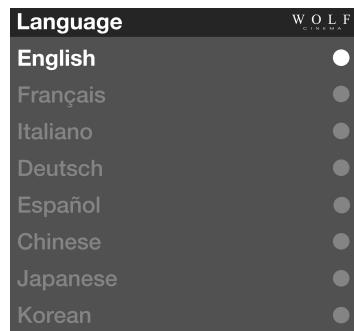
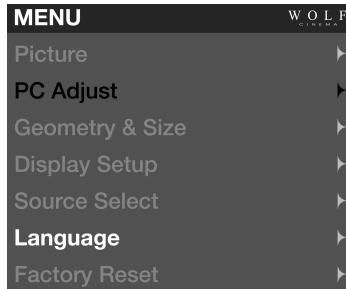
1 Press **TV/Projector** then **MENU**.

The projector menu will be displayed.

2 Scroll down and select **Language**

3 Press the right arrow, select the desired language, then press **OK**.

4 Press **EXIT**.



Adjusting the Projector Menus

This projector has a set of menu screens that allow you to adjust the image and select various projector settings. You can operate the menus from the remote control using the following procedure.

1 Press **TV/Projector** then **MENU** on the remote control.

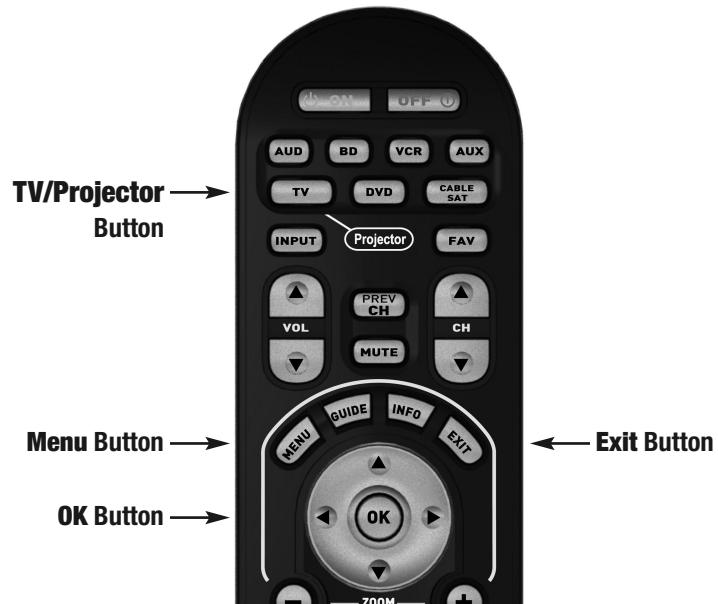
The projector menu will be displayed.

2 Press **OK** and then the right or down arrows to select the menu you want to adjust.

3 Press **OK** or the right arrow to reach the adjustment menu. Scroll to select the item you wish to adjust.

4 Press **OK** to adjust the item, then use the left or right arrow button to adjust the desired parameters.

5 Press **EXIT** to exit the adjustment menu.



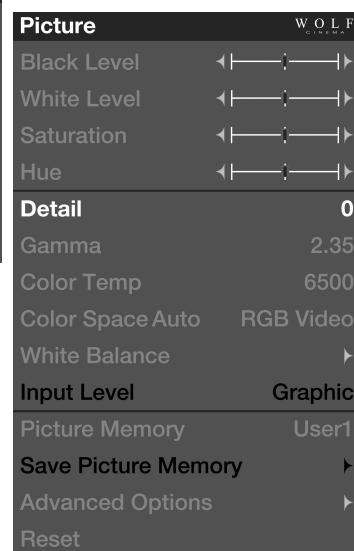
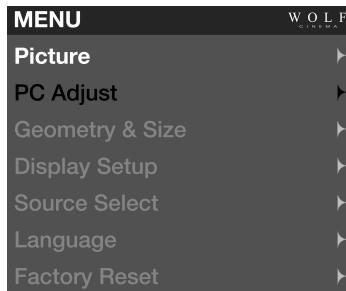
Note: When no input source is detected, the **Picture**, **Fine Sync** and **Layout** are not active. When selecting the projector menus, always point the universal remote control at the projector, and select **TV/Projector** first to enable the discrete projector functions.

DCL-200 FD 1080p DLP LED Front Projector User's Manual

Easy to Use Functions

Adjusting the Picture

You can adjust the projector's image quality to desired preferences via the following picture adjustment controls.



Adjusting Picture Preferences

Selected Item	Description		
Black Level	For adjusting the brightness of an image	For lower brightness	For higher brightness
White Level	For adjusting the contrast level	For lower contrast	For higher contrast
Saturation	For adjusting the color intensity of an image	For lower color intensity	For higher color intensity
Hue	For adjusting the tones of an image	Skin tones become purplish	Skin tones become greenish

Blacklevel

Use this option to adjust the overall brightness of the image, improving the in-scene black levels. Use this control in conjunction with contrast to fine-tune the display. The scale is from -50 to 50.



White Level

Use this option to adjust the White Levels (contrast) of the image. Use this control in conjunction with brightness to fine-tune the display. The scale is from -50 to 50.



Saturation

Use this option to adjust the color intensity of the image.



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Hue

Use this option to adjust the tint (or hue) of your image.



Detail

Use this option to adjust the clarity and focus of the image.



Gamma

Use this option to adjust the gamma (black to white transition) correction of the image. The default setting is 2.2. Gamma correction provides for eight sets of gamma curves: 1.0, 1.5, 1.8, 2.0, 2.2, 2.35, 2.5, and 2.8.



Color Temp

Use this option to set the color temperature of the image. There are five color temperature settings: Warm, D65, Native, Cool, and Cold. The Cold and Cool color temperatures shift the image towards bluish hues, and the Warm color temperature shifts the image towards a reddish hue. When set to **Native**, the image has the maximum brightness. For best results with film and TV content, set to D65.



Color Space

Use this option to determine how the color components of an input signal are decoded for accurate color on the display. In most situations, the Auto setting produces the most accurate colors. If it does not, try the other settings and select the one that offers the best image.



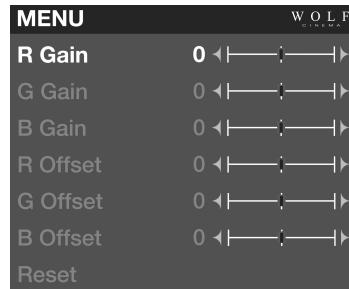
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White Balance

To remove any trace of color from the white areas of the projected image, choose **White Balance** from the **Picture** menu and press **ENTER**.

Gain: Use the Gain controls to correct color imbalances in the bright areas of the image.

Offset: Use the Offset controls in the White Balance sub-menu to correct color imbalance in the dark areas of the image.



Picture Memory

This function stores Brightness, Contrast, Color, Tint, Sharpness, Gamma, Color Temperature, Color Space, White Balance, and Black Level set in **Picture**.

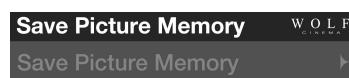
Each stored setting is reassigned to each input and resolution mode.



- Note:**
- **When Recalling Saved Contents:** When a saved memory number is selected, the contents of the "Picture" menu change to the adjustment values of the saved memory number.
 - **When Editing Saved Contents:** Edit the contents of the "Picture" menu after selecting the Memory number for which adjustment values are to be edited.
 - The default three modes Normal/Bright/Movie cannot be adjusted.

Save Picture Memory Settings

Use this option to save changes you made in **Picture Memory** to Memory 1, Memory 2, or Memory 3.

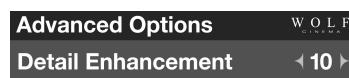


Advanced Options

Select this **Menu** to access **Detail Enhancement** functions.

Detail Enhancement: This function sharpens the details of the picture.

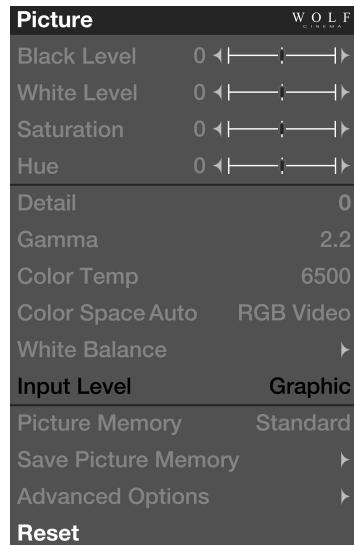
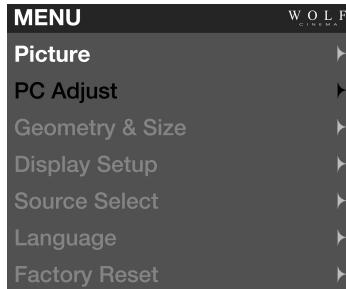
The scale can be adjusted from 0 to 20.



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Reset

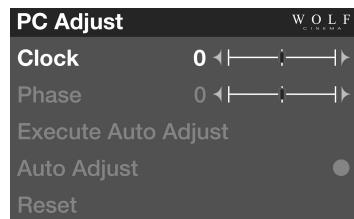
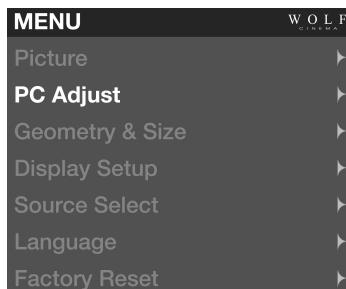
Select this option to set to all items in the **Picture** menu to the factory default values.



Adjusting Computer Images (Component / PC only)

Use the **Fine Sync** function in case of irregularities such as vertical stripes or flickering in portions of the screen.

Select **Clock**, **Phase**, **Execute Auto Tune**, and **Auto Tune** in the **Fine Sync** menu on the **MENU** screen.



Selected Item	Description
Clock	Adjusts vertical noise.
Phase	Adjusts horizontal noise (similar to tracking on a VCR).
Execute Auto Tune (PC only)	To run auto tune.
Auto Tune (PC only)	Automatically adjusts a computer image. Select "Execute Auto Tune".

Note: Auto Tune may take some time to complete, depending on the image stored in the computer connected to the projector.

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Selecting a Favorite Aspect Ratio (FAV Button)

This function allows you to modify or customize the picture display mode to enhance the input image. Depending on the input signal, you can choose **Anamorphic**, **Standard**, **LetterBox**, or **Panoramic**.

Press **TV/Projector** on the remote, select **MENU** and then select **Layout** on the menu screen. Select the **Aspect Ratio** button.

ALTERNATE ACCESS: Toggle through the **FAV** button (Favorite Aspect Ratio on the remote):

Aspect Ratio Function

The **Layout** menu enables you to control how the projector resizes the input image.

The following options are available:

Anamorphic

- Resolution 1920x1080
- 4:3 input is stretched to fit 16:9 display
- Stretches entire image.

Standard

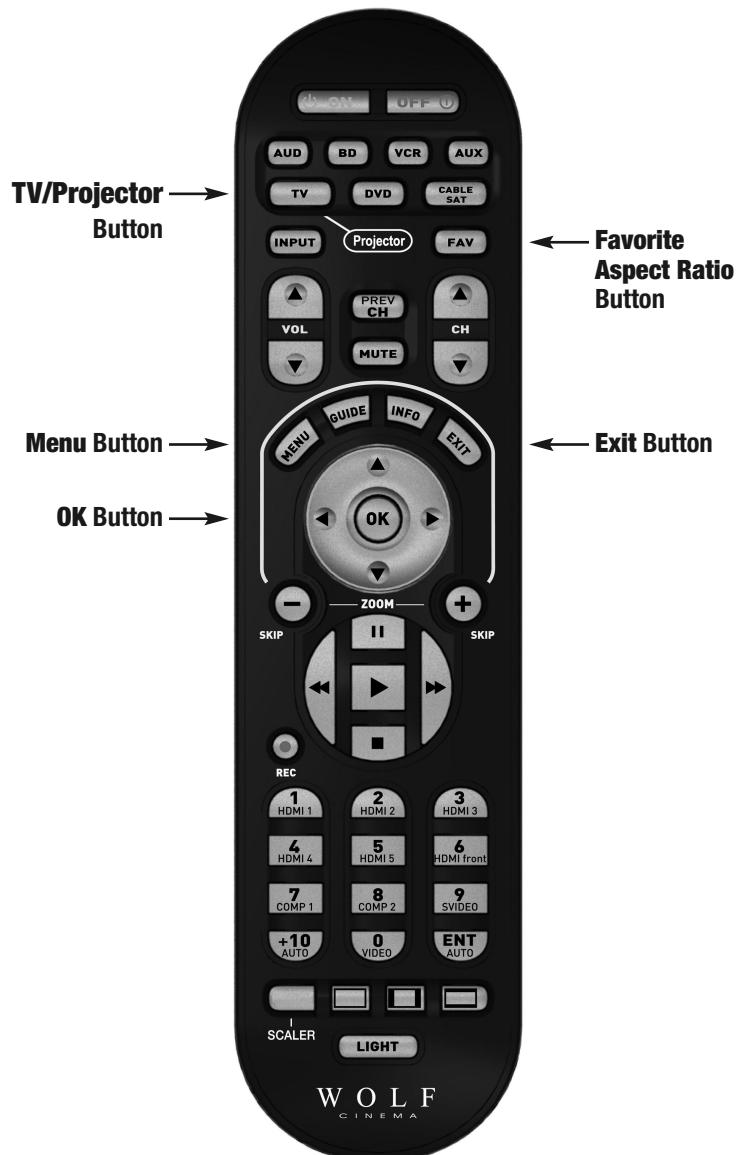
- Resolution depends on the Input Signal
- 4:3 input scaled to fit display height
- Width scaled to maintain 4:3 aspect ratio
- Black bars on left and right (taking up 25% of the whole display)

LetterBox

- Resolution 1920x1080
- 4:3 input scaled to fit display width
- Height scaled to maintain 4:3 aspect ratio: 1440x1080
- 25% of the entire image on the top and bottom is cropped.

Panoramic

- Resolution 1920x1080
- 4:3 input is stretched to fit 16:9 display
- With 4:3 input, the central ratio remains true to scale, but the image is stretched to fit display width.
- 16:9 input image is identical to the one displayed in Anamorphic mode.



Note: Each time the **FAV** button is pressed, the display changes as shown on page 27 and 28.

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VIDEO

		Anamorphic	Standard	LetterBox	Panoramic
For 4:3 aspect ratio	480i 480p 576i 576p NTSC PAL SECAM	1920x1080	1440x1080	1920x1080	1920x1080
For 16:9 aspect ratio	480p 576p	1920x1080	1440x1080	1920x1080	1920x1080
	720p	1920x1080	1440x1080	1920x1080	1920x1080
	1080i/p	1920x1080	1440x1080	1920x1080	1920x1080

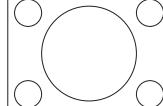
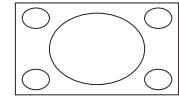
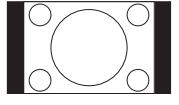
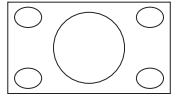
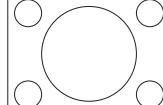
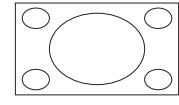
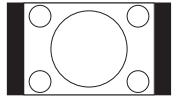
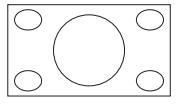
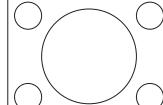
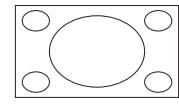
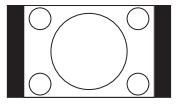
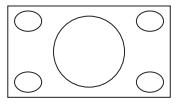
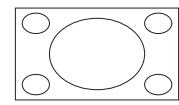
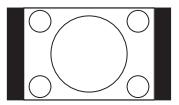
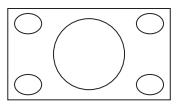
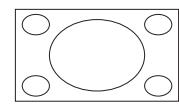
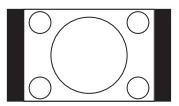
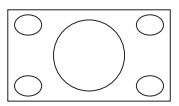
	Input Signal	Output Screen Image			
		Anamorphic	Standard	LetterBox	Panoramic
480i 480p 576i 576p NTSC PAL SECAM	For 4:3 Aspect Ratio				
	LetterBox Image				
1080i/p	For 16:9 Aspect Ratio				
720p					

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COMPUTER

		Anamorphic	Standard	LetterBox	Panoramic
For 4:3 aspect ratio	VGA(640x480)	1920x1080	1440x1080	N.A.	1920x1080
	SVGA(800x600)	1920x1080	1440x1080	N.A.	1920x1080
	XGA(1024x768)	1920x1080	1440x1080	N.A.	1920x1080
	SXGA(1280x1024)	1920x1080	1440x1080	N.A.	1920x1080
	UXGA(1600x1200)	1920x1080	1440x1080	N.A.	1920x1080

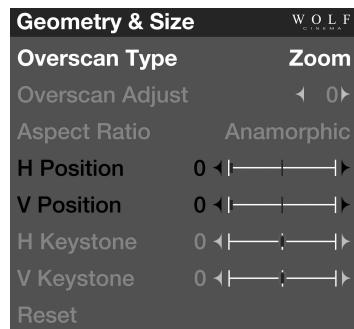
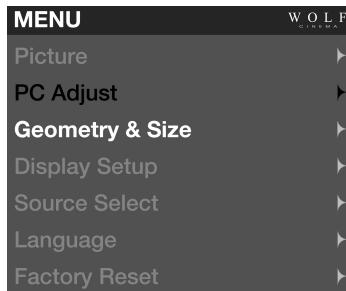
	Input Signal	Output Screen Image			
		Anamorphic	Standard	LetterBox	Panoramic
VGA	 For 4:3 Aspect Ratio (640x480)			N.A.	
SVGA	 For 4:3 Aspect Ratio (800x600)			N.A.	
XGA	 For 4:3 Aspect Ratio (1024x768)			N.A.	
SXGA	 For 5:4 Aspect Ratio (1024x768)			N.A.	
UXGA	 For 4:3 Aspect Ratio (1600x1200)			N.A.	

Overscan Type

This function enables you to adjust image size, zoom or crop edges of the image.

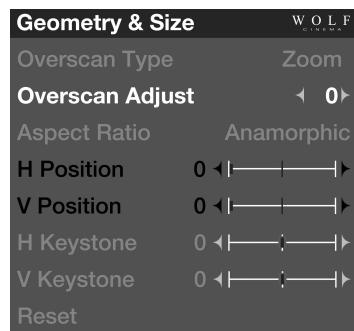
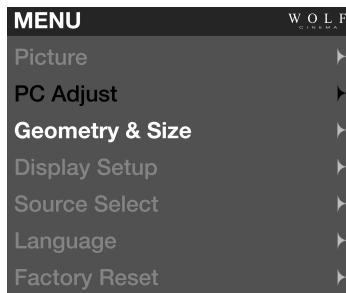
The following options are available:

Selected Item	Description
Zoom	Scales or zooms the image.
Crop	Cuts a portion of the image.



Overscan Adjust

This function enables you to adjust the image display on screen. Available options are from 0-10. The default value is 1 which is suitable for S-Video/Composite and Component input sources.

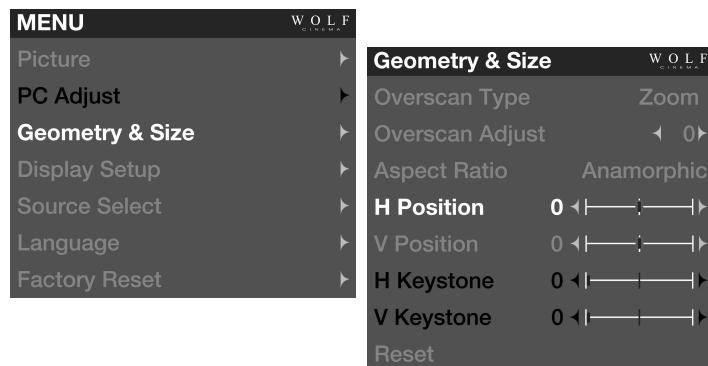


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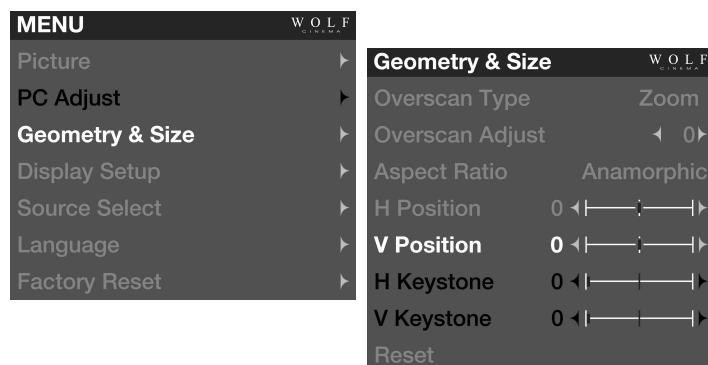
H-V Position

This function enables you to center the display vertically and horizontally, shifting the image as desired.

- 1 Select the desired **H Position** adjustment control in the **Layout** tab Press the left or right controls to shift the image laterally.



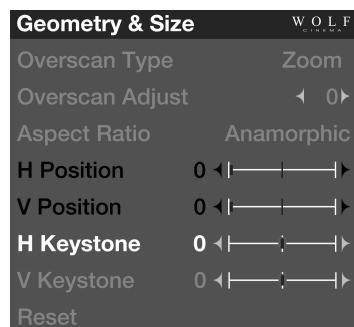
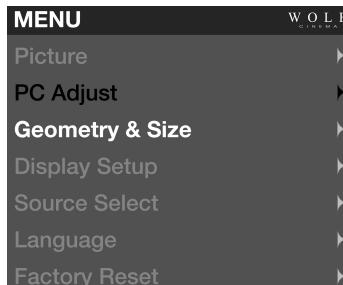
- 2 Select the desired **V Position** control in the **Layout** tab. Press the left or right controls to shift the image vertically.



H-V Keystone Function

Correcting Trapezoidal Distortion and Adjusting Vertical Size of the picture.

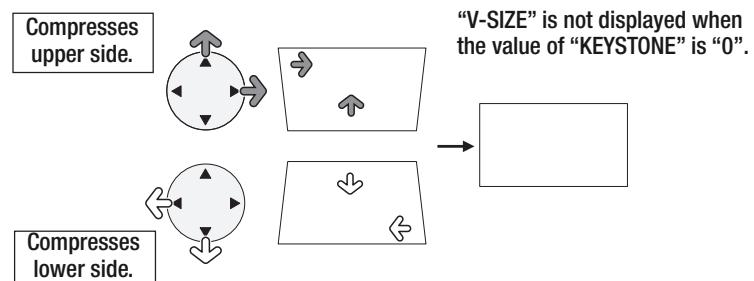
This function allows for Keystone correction.



Note: When the image is projected either from top or from bottom toward the screen at an angle, the image becomes distorted trapezoidally. The function for correcting trapezoidal distortion is called Keystone Correction.

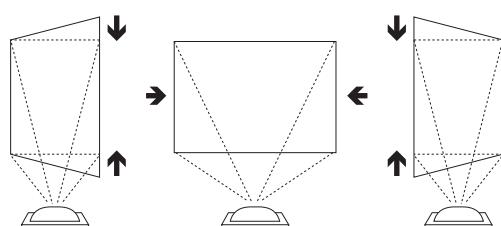
1 Select **MENU** then the **Layout** tab, then choose **H Keystone** or **V KEYSTONE**.

Selected Item	Description
Horizontal Keystone	Horizontally adjusts the keystone settings.
Vertical Keystone	Vertically adjusts the keystone settings.

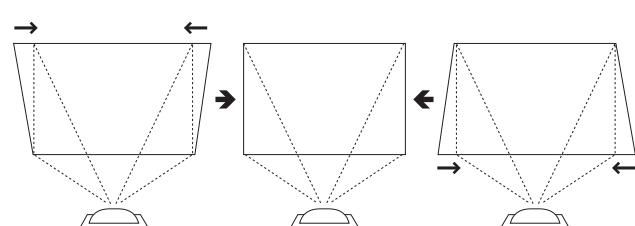


2 Select the left, right, up or down arrows to adjust for keystone correction.

Note: • Since the trapezoidal distortion of the image can be corrected up to various angles, the actual screen can be diagonally set up to that angle as well.
• Straight lines or the edges of images may appear jagged while adjusting the image.



Horizontal Keystone Correction



Vertical Keystone Correction

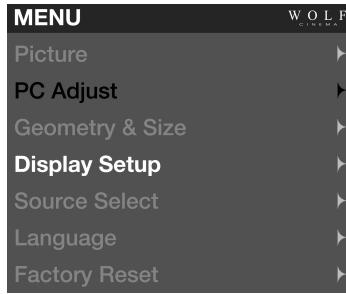
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Display Setup – Lamp Power

This function allow you to increase the functional brightness of the projector [at some tradeoff to color fidelity].

Note: For best results, Wolf Cinema recommends you operate and calibrate this projection system in the **NORMAL** mode.

Status	Brightness
Normal	80%
Overlap	100%

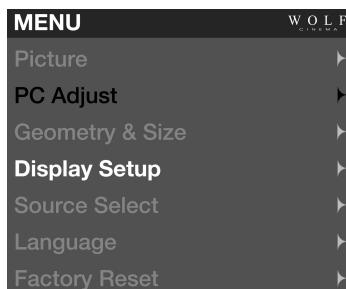


Note: • Although noise is increased when **Display Mode** is set to **Overlap**, brightness increases by 20%.
• **Display Mode** is preset to **Normal**.

Sync Threshold

This function is only available on Component input.

The projector is compatible with EDTV(480p and 576p) and HDTV(720p,1080i and 1080p) video signals. If a hardware device, such as a DVD player, is not syncing properly with the projector, adjust this option to help it to sync when connected to the projector.

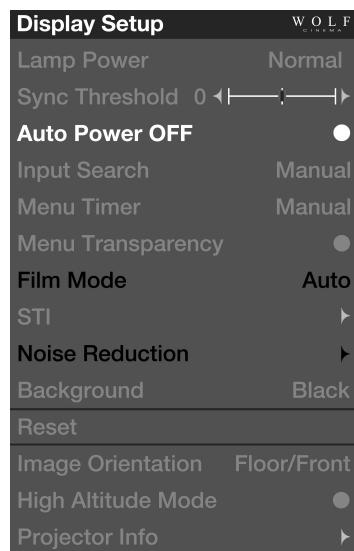
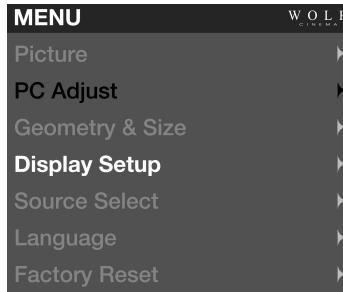


Automatic Power OFF Function

When an input signal is not detected or you don't press any input button on the remote control for more than 15 minutes, the projector will automatically turn off if set to **ON**.

Auto Power OFF function will be disabled when it is set to "OFF".

Note: When the **Auto Power OFF** function is set to "ON", 5 minutes before the power turns off, the message "Power OFF in 5 min." will appear on the screen to indicate the remaining minutes.

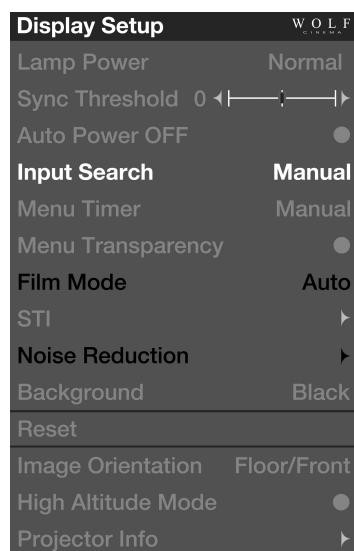
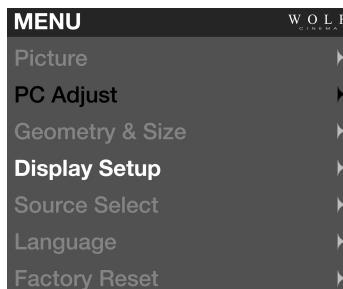


Input Search

Used to select the input source automatically when there is no signal in the current input.

Selected Item	Description
Input Search	Manual
	Auto

Note: If you select **Auto**, the input source is selected automatically.

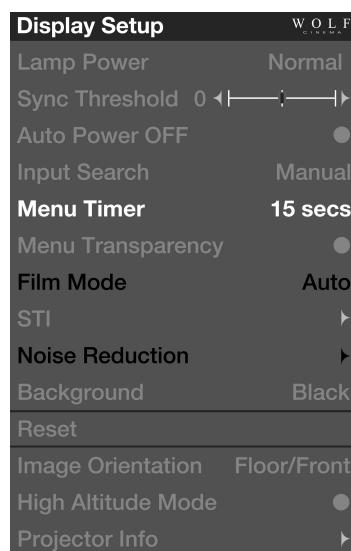
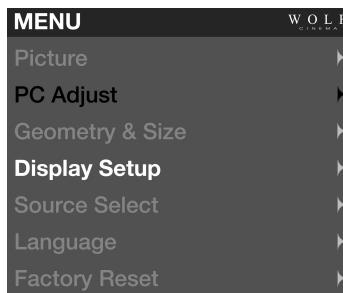


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Menu Timer

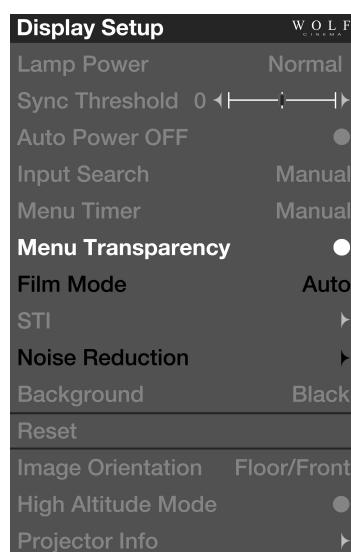
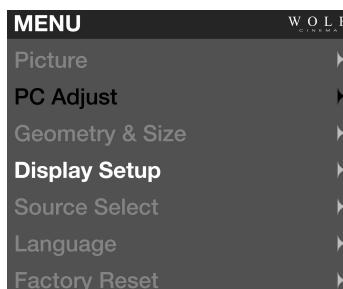
Menu Timer is used to set how long the on screen display menu will remain, if no further buttons or activity is requested.

Menu Time	5 secs
	15 secs
	60 secs
	Limitless



Menu Transparency

When this option is selected is enabled, the on-screen display turns transparent to the user, blending in with the background image.



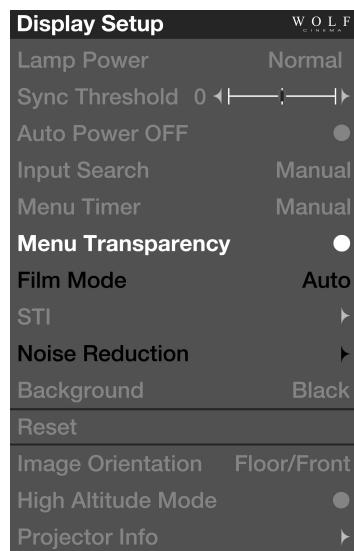
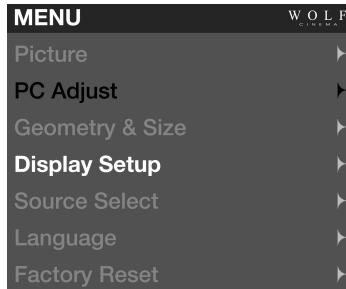
DCL-200 FD

Film Mode

This function allows you to select the type of incoming video content-film. Different processing algorithms are applied for each type of video content.

Wolf Cinema recommends you leave the system in the **AUTO** mode.

Film Mode	Reproduces the image of the film source clearly. Displays the optimized image of film transformed with 3:2 pull down (NTSC and PAL60Hz) or 2:2 pull down (PAL 50Hz and SECAM) enhancement to progressive mode images.
------------------	---

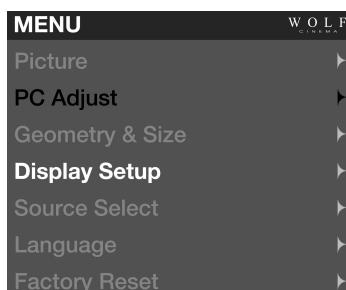


Note: In PAL50Hz or SECAM, the 2:2 pull down enhancement will be enabled only in film mode, after the film source has been entered.

STI

This function allows you to set the LTI and CTI levels.

Selected Item	Description
LTI Luminance Transient Improvement	Adjusts the LTI level to enhance luminance, filter fuzzy edges and remove smear.
CTI Color Transient Improvement	Adjusts the CTI level to enhance color, filter fuzzy edges and remove smear.

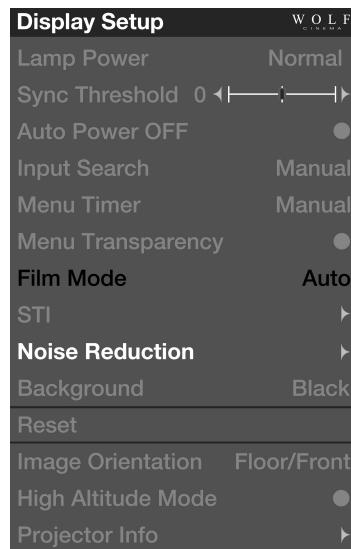
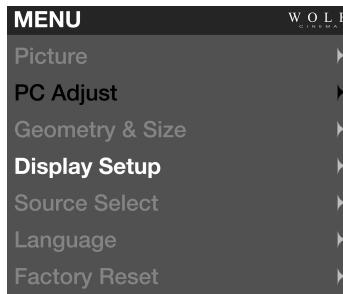


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Noise Reduction

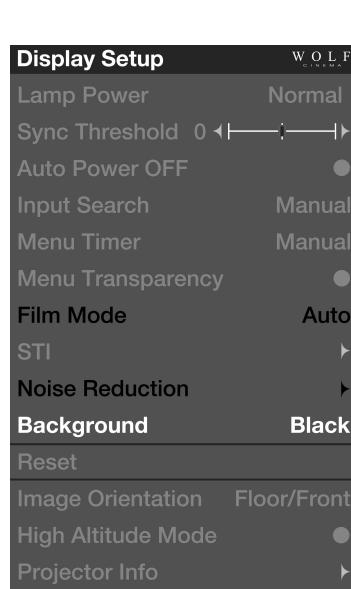
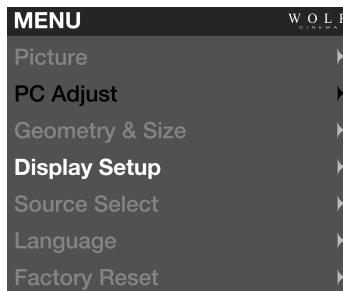
This function is only available for SDTV (480i/576i) and EDTV (480p/576p) signals.

Noise Reduction is useful for clearing up noisy images. Keep in mind that reducing “noise” (which reduces high frequencies) may also “soften” the image.



Background

This function is used to apply the background color when there is no input source detected.



Reset

Select this option to set all items in the **Display Setup** menu to the factory default values except **Image Orientation**.

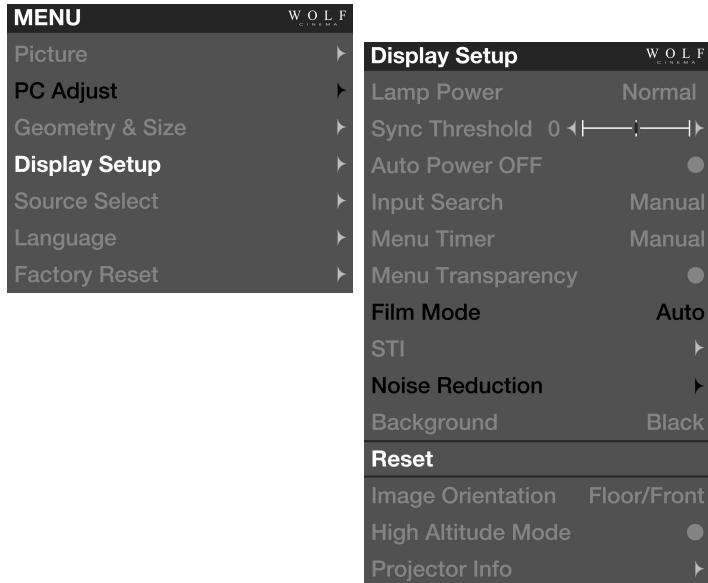
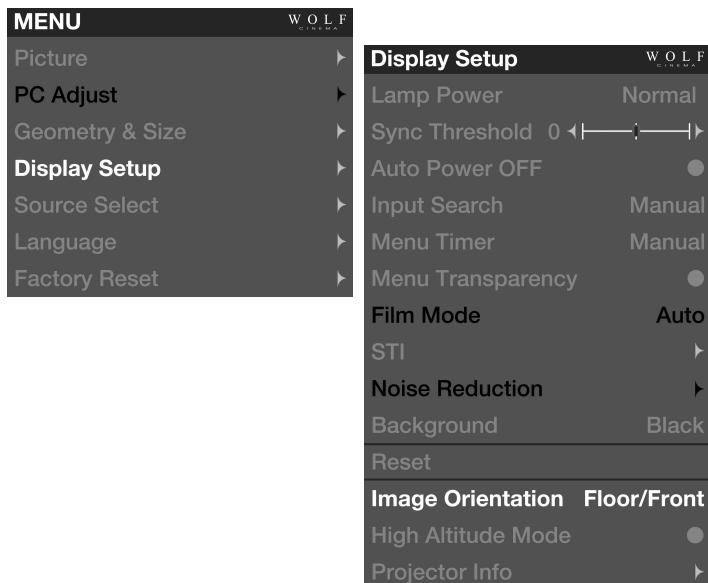


Image Orientation

This projector is equipped with a reverse/invert image function that allows you to reverse or invert the projected image for various screen types and applications.

Setting the Image Orientation

Selected Item	Description
Front	Normal image
Front + Ceiling	Inverted image
Rear	Reversed image
Rear + Ceiling	Reversed and inverted image

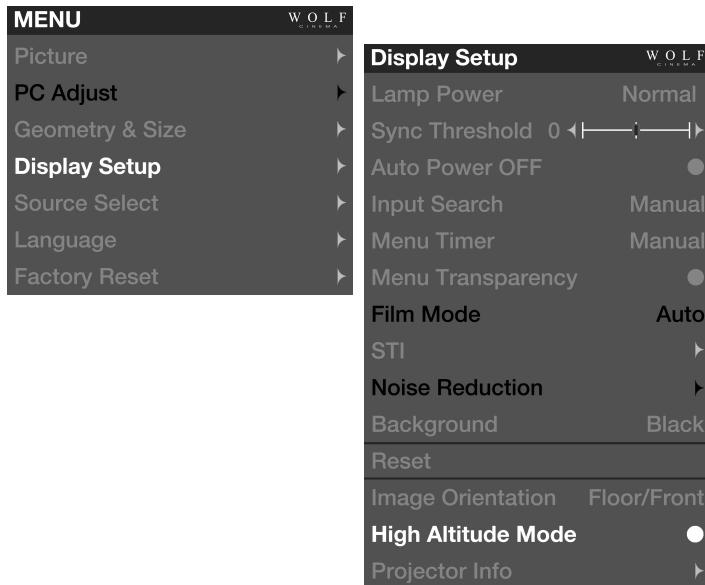


Note: This function is used for the reversed image and ceiling-mount setups.

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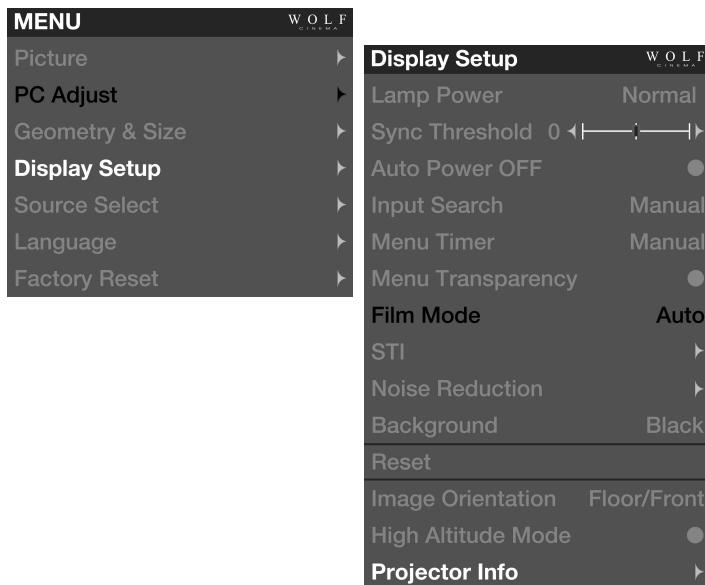
High Altitude Mode

When the mode is enabled, system fans will be operating in a high speed mode. This will insure proper cooling when installed at altitudes greater than 4000 feet.



Projector Info

The Status screen displays information about the projector: Current Input Source, Resolution, Horz Freq, Vert Freq, and Firmware Information.

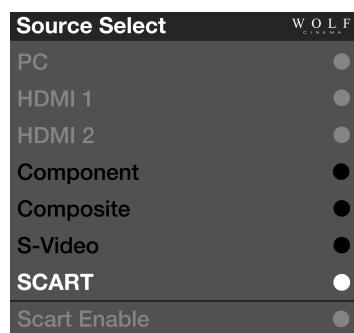
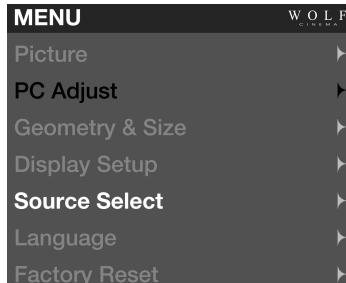


Projector Info	
Input Source	HDMI 1
Resolution	1920x1080
Horz Freq	67.5 KHz
Vert Freq	60.0 Hz
Power On Timer	92
F/W Information	705.205.47

DCL-200 FD

Source Select

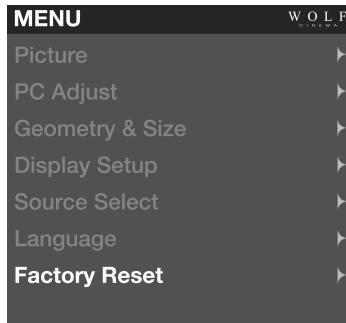
Select **TV/Projector** and then **MENU**. Next select **INPUT** to view available inputs and change source selections.



Note: • Your projector many NOT offer all these inputs available in this screen. When the Wolf Cinema projector is configured to operate with the ProScaler, only the single HDMI 1 input is used at the projector end. All other sources are selected at the ProScaler.
• If you select **Auto** as the Input source, then the correct input source is automatically selected.

Factory Reset

This process will set all the items to Factory default settings except **Image Orientation**.



Note: If you accidentally press the **FACTORY RESET** button and do not want to perform the factory reset function, press the **EXIT** button or select **No** to turn off the confirmation message.

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Appendix

Maintenance

Cleaning the Projector

Unplug the power cord before cleaning the projector.

Avoid using benzene or thinner, as these can damage the finish on the cabinet and operation panel.

Do not use volatile agents such as insecticides on the projector.

Do not leave rubber or plastic objects in contact with the projector for long periods as they may damage the finish of the projector.

Wipe off dirt gently with a soft flannel cloth.

For hard-to-remove dirt, soak a cloth in a *neutral detergent diluted with water*, wring the cloth well and then wipe the projector.

Strong cleaning detergents may discolor, warp or damage the coating on the projector. Make sure to test on a small, inconspicuous area on the projector before using.

Cleaning the Lens

Use a commercially available *blower or lens cleaning paper* (for glasses and camera lenses) for cleaning the lens. Do not use any liquid cleaning agents, as they may wear off the coating film on the surface of the lens.

The surface of the lens is easily damaged, do not to scrape or hit the lens.

Cleaning the Exhaust and Intake Vents

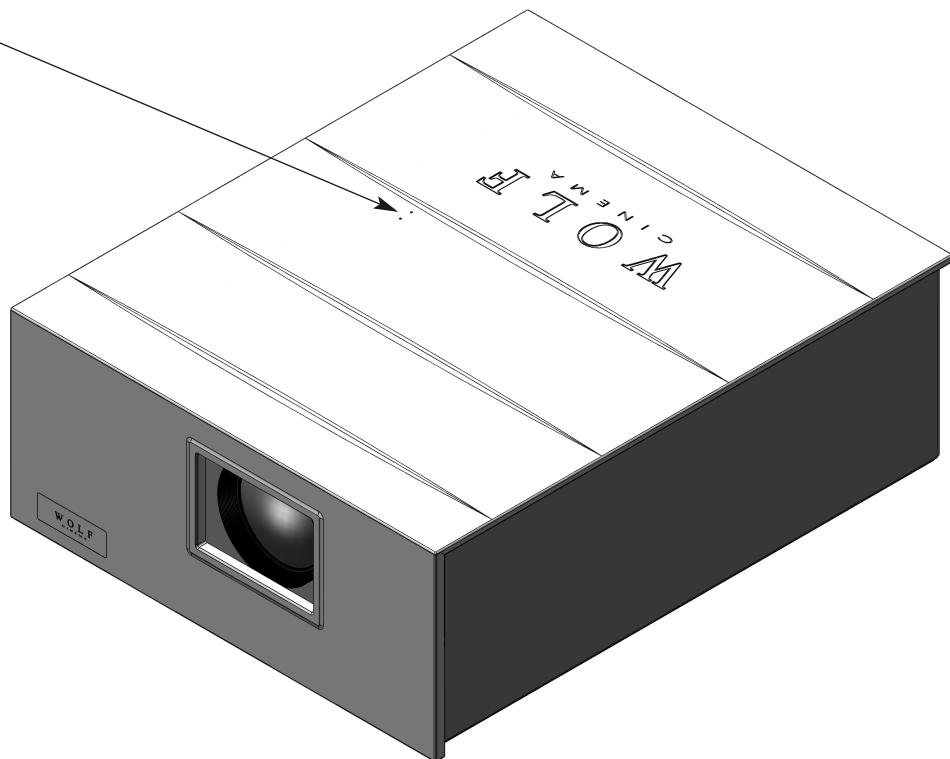
Use a vacuum cleaner to clean dust from the exhaust vent and the intake vent.

DCL-200 FD

Temperature LED (Over Temperature)

The over temperature alarm LED on the top alerts you when the projector LED light source becomes too hot or the peripheral is sultry.

Temperature LEDs



If the Red and Blue LED illuminates during operation, the LED will shut off and the cooling fans will continue to run for approximately 10 seconds. You should ensure that the airflow around the projector is sufficient, and ensure that the projector has proper ventilation.

R LED Over Temperature !

G LED Over Temperature !

B LED Over Temperature !

When the over temperature LED lights up, a warning also appears on the screen.

The over temperature alarm LED on the top alerts you when the ambient temperature is too hot. If the LED blinks twice blue then one red during operation, the LEDs will shut off and the cooling fans will continue to run for approximately 15 seconds. You should ensure that the airflow around the projector is sufficient, and ensure that the projector has proper ventilation.

Ambient Over Temperature !

When the over temperature LED lights up, a warning also appears on the screen.

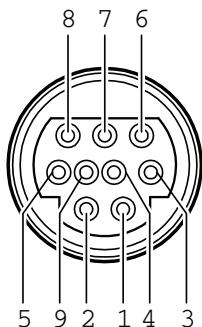
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Connecting Pin Assignments

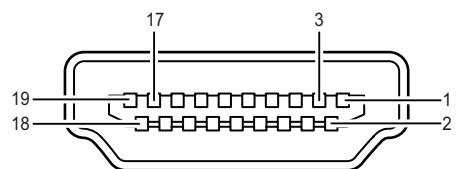
RS-232C Port: 9 pin Mini pin plug connector to D-Sub Female connector.

Pin	Signal	Name	I/O	Reference
1				Not connected
2	SD	Send Data	Input	Connected to internal circuit
3	RD	Receive Data	Output	Connected to internal circuit
4				Not connected
5	SG	Signal Ground		Connected to internal circuit
6				Not connected
7				Not connected
8				Not connected
9				Not connected



HDMI Port: 19 pin male connector of the High Definition Multimedia Interface.

Pin	Signal	Pin	Signal
1	T.M.D.S data 2+	11	T.M.D.S clock shield
2	T.M.D.S data 2 shield	12	T.M.D.S clock-
3	T.M.D.S data 2-	13	Not connected
4	T.M.D.S data 1+	14	Reserved (N.C. on device)
5	T.M.D.S data 1 shield	15	DDC clock
6	T.M.D.S data 1-	16	DDC data
7	T.M.D.S data 0+	17	DDC ground
8	T.M.D.S data 0 shield	18	+5V power
9	T.M.D.S data 0-	19	Hot plug detection
10	T.M.D.S clock+		



DCL-200 FD

Computer Compatibility

Computer

- Multiple signal support
- Horizontal Frequency: 25-91 kHz, Vertical Frequency: 24-85 Hz, Pixel Clock: 25-162 MHz
- XGA, SXGA, UXGA compatible with advanced intelligent compression

The following is a list of modes that conform to VESA (this projector also supports other signals that are not VESA standards):

PC MAC WS	Resolution		Horizontal Frequency (kHz)	Vertical Frequency (Hz)	VESA Standard	HDMI Support
PC	VGA	DOS	720x400	31.5	70	3
				31.5	60	
			640x480	37.9	72	3
				37.5	75	3
				43.3	85	3

HDMI	Resolution		Horizontal Frequency (kHz)	Vertical Frequency (Hz)	VESA Standard
	720x480		31.5	60	
	720x576		31.3	50	
	1280x720		45	60	
			37.5	50	
	1920x1080i		33.8	60	
			28.1	50	
	1920x1080p		27	24	
			56.3	50	
			67.5	60	

PC MAC WS	Resolution		Horizontal Frequency (kHz)	Vertical Frequency (Hz)	VESA Standard	HDMI Support
PC	VGA	SVGA	800x600	35.1	56	
				37.9	60	
				48.1	72	
				46.9	75	
				53.7	85	
PC	XGA	1024x768		48.4	60	
				56.5	70	
				60.0	75	
				68.7	85	
				64.0	60	
MAC 13"	SXGA	1280x1024		80.0	75	
				91.1	85	
				WSXGA	1680x1050	60
MAC 16"	VGA	UXGA	1600x1200	65.2	3	3
				75.0	60	3
MAC 19"	SVGA	832x624		49.6	75	3
	XGA	1024x768		48.4	75	3

Note: • This projector may not be able to display images from notebook computers in simultaneous (CRT/LCD) mode. Should this occur, turn off the LCD display on the notebook computer and output the display data in "CRT only" mode. Details on how to change display modes can be found in your notebook computer's operation manual.

• When projecting video images of an interlace video signal, the intended image may not be projected when using the RBG input. In such cases, use the Component input, S-Video input or Composite input.

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Video Compatibility

Resolution		Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Component Support	S-Video Support	Composite Support	HDMI Support
SD Video	NTSC	640x480i	15.7	59.94/60	3	3	3
	PAL	768x576i	15.6	50	3	3	3
	SECAM	768x576i	15.6	50	3	3	3
	NTSC-4.43			3	3	3	
	PAL-M			3	3	3	
	PAL-N			3	3	3	
	NTSC-J		3	3	3	3	
	PAL-60		60	3	3	3	
	NTSC-50		50				
ED TV	480p	720x480p	31.5	59.94/60	3		3
	576p	720x576p	31.3	50	3		3
	1035i/60	1920x1035i	33.8	60	3		3
HD TV	1080i/50	1920x1080i	28.1	50	3		3
	1080i/60	1920x1080i	33.8	59.94/60	3		3
	720p/50	1280x720p	37.5	50	3		3
	720p/60	1280x720p	45.0	59.94/60	3		3
	1080p/24	1920x1080p	27.0	24	3		3
	1080p/25	1920x1080p	28.1	25	3		3
	1080p/30	1920x1080p	33.8	30	3		3
	1080p/50	1920x1080p	56.3	50	3		3
	1080p/60	1920x1080p	67.5	60	3		3
HTPC	720p/48	1280x720p	36	48			3

1 Component supports signal formats are Y/Pb/Pr, Y/Cb/Cr.

2 VGA port support signal formats are RGBHV, RGsB, and RGBCs.

DTV Compatibility

Signal	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	HDMI Support
480i	15.7	60	
480p	31.5	60	3
576i	15.6	50	
576p	31.3	50	3
720p	45.0	60	3
720p	37.5	50	3
1080i	33.8	60	3
1080i	28.1	50	3
1080p	27	24	3
1080p	28.1	25	3
1080p	33.8	30	3
1080p	56.3	50	3
1080p	67.5	60	3

DCL-200 FD

Troubleshooting

Problem	Check
Projector does not start	Projector power cord is not plugged into the wall outlet. Remote control batteries need replacing.
No picture	The selected projector input mode is wrong. Select TV/Projector then HDMI 1 HDMI cable may be incorrectly connected to the rear panel of the projector. Check power to the external devices, including ProScaler. The video signal format of the video equipment is not set correctly.
Color is faded	Picture adjustments are incorrectly set.
Picture is blurred	Adjust the projector focus. The projection distance exceeds the focus range.
Picture noise appears	(Component/VGA input only) Perform Fine Sync adjustments ("Clock" adjustment) also in Component. Perform Fine Sync adjustments ("Phase adjustment) also in Component.
Picture is green on INPUT1 COMPONENT	Change the input signal type of the video equipment.
Picture is dark	Picture adjustments are incorrectly set.
Picture is too bright and whitish	Picture adjustments are incorrectly set.

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Product Specifications

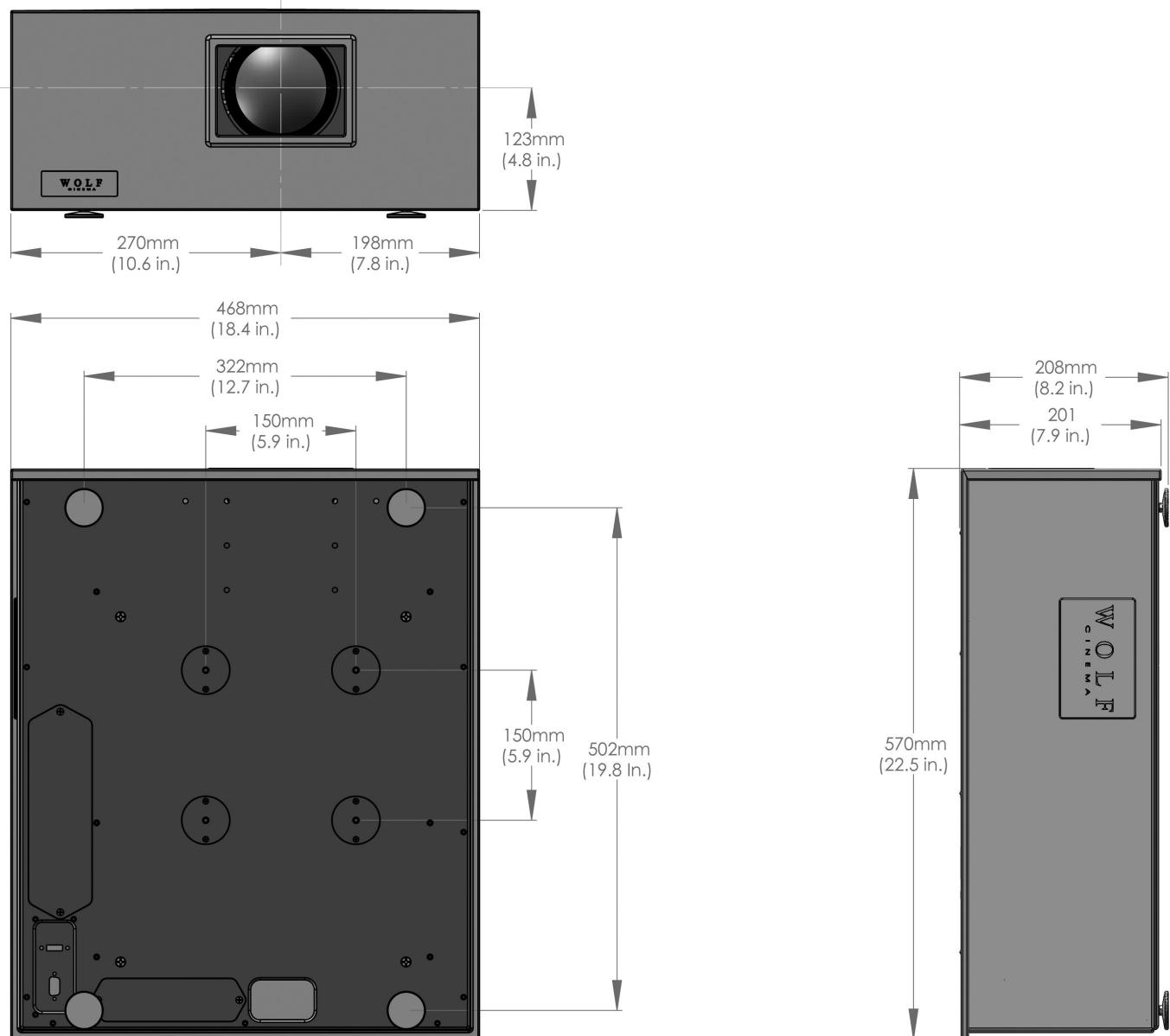
Item	Description
Model	Wolf Cinema DCL-200FD, a DLP® LED Front Projector
DLP Panel	Panel size: 0.95 in. Display method: DMD by Texas Instruments Device method: Digital Light Processing (DLP™)
Resolution	1920 x 1080 pixels
Short Throw Lens	1.5 ~ 2.1 x Screen Width (=/- 5% tolerance), F2.25 ~ 2.39, f= 30.63 ~ 42.93 mm
Long Throw Lens	2.1 ~ 4.0 x Screen Width (=/- 5% tolerance), F2.2, f= 43.12 ~ 85.16 mm
Light source	LED
Input Sources	Video: HDMI x 1, All source components are connected to the Wolf Cinema outboard ProScaler Control: RS-232 (For computer or home automation control system) x 1, IR Receiver (For remote) x 2, 12V trigger output x 2, USB x 1
2D Lens Shift Ability (Short Throw Lens)	1/2 of screen height: Up 120%, Down 50% 1/2 of screen height: Left 15%, Right 15%
2D Lens Shift Ability (Long Throw Lens)	1/2 of screen height: Up 120%, Down 50% 1/2 of screen height: Left 15%, Right 15%
Digital Keystone Correction	2D correction
Projection Lens	Zoom and focus with motorized lens
Screen Size (Short Throw Lens)	65 ~ 200 in.
Screen Size (Long Throw Lens)	65 ~ 200 in.
Projection Distance in 100 in. (Short Throw Lens)	3.3 ~ 4.6 m
Projection Distance in 100 in. (Long Throw Lens)	4.6 ~ 9.1m
Video Enhance	3D Y/C separation in Composite Video
Projection Method	Front / Rear Desktop, Front / Rear Ceiling
OSD Control	IR remote control
Video System	NTSC, 3.58/NTSC, 4.43/PAL/PAL-M/PAL-N/PAL, 60/SECAM/EDTV480p/EDTV, 576p/HDTV, 720p/HDTV, 1080i/HDTV, 1080p
Dimensions	19.8 x 18.4 x 7.9 in., 502 x 468 x 201 mm (L x W x H)
Weight	65 lbs (29.5 kg)
Power Supply	100 ~ 240 V AC, 50/60 Hz
Power Consumption	Maximum: 370 W Normal: less than 300 W Standby: less than 1 W
Operating Temperature	5° C to 35° C

Specifications are subjected to change without notice.

DCL-200 FD

Product Dimensions

Units: mm (inch)



Note: Your projector comes with 4 screws in the bottom. Don't remove screws if you do not use ceiling mount.

⚠ Authorized technician should perform the installation only.

⚠ When using the ceiling mount bracket, the safety instructions provided with the bracket must be strictly observed. Place the projector at the desired distance from the screen: the size of the projected image depends upon the distance between the lens and the screen and the zoom setting.

⚠ For ceiling/wall installation, by means of suspension bracket, carefully follow the instructions and safety instructions recommended by the manufacturer in the bracket's literature.

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